

# MODIS FLIGHT OPERATIONS

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# SCOPE

Flight Operations encompasses two major activities:

1. Commanding and Controlling the Instrument
2. Monitoring the Health and Safety of the Instrument

The Flight Operations Team (FOT, Codes 400 and 500) provides the primary command and monitoring for the spacecraft and all the instruments.

The MODIS Sensor Operations Team (MODSOT) establishes MODIS specific requirements for command and monitoring, provides the command lists and procedures, and is responsible for non-safety monitoring (instrument performance and L1-B fidelity).

# DEFINITIONS

For monitoring, Flight Operations is concerned with the telemetry--currently does not examine the science data (video data from the MODIS detectors).

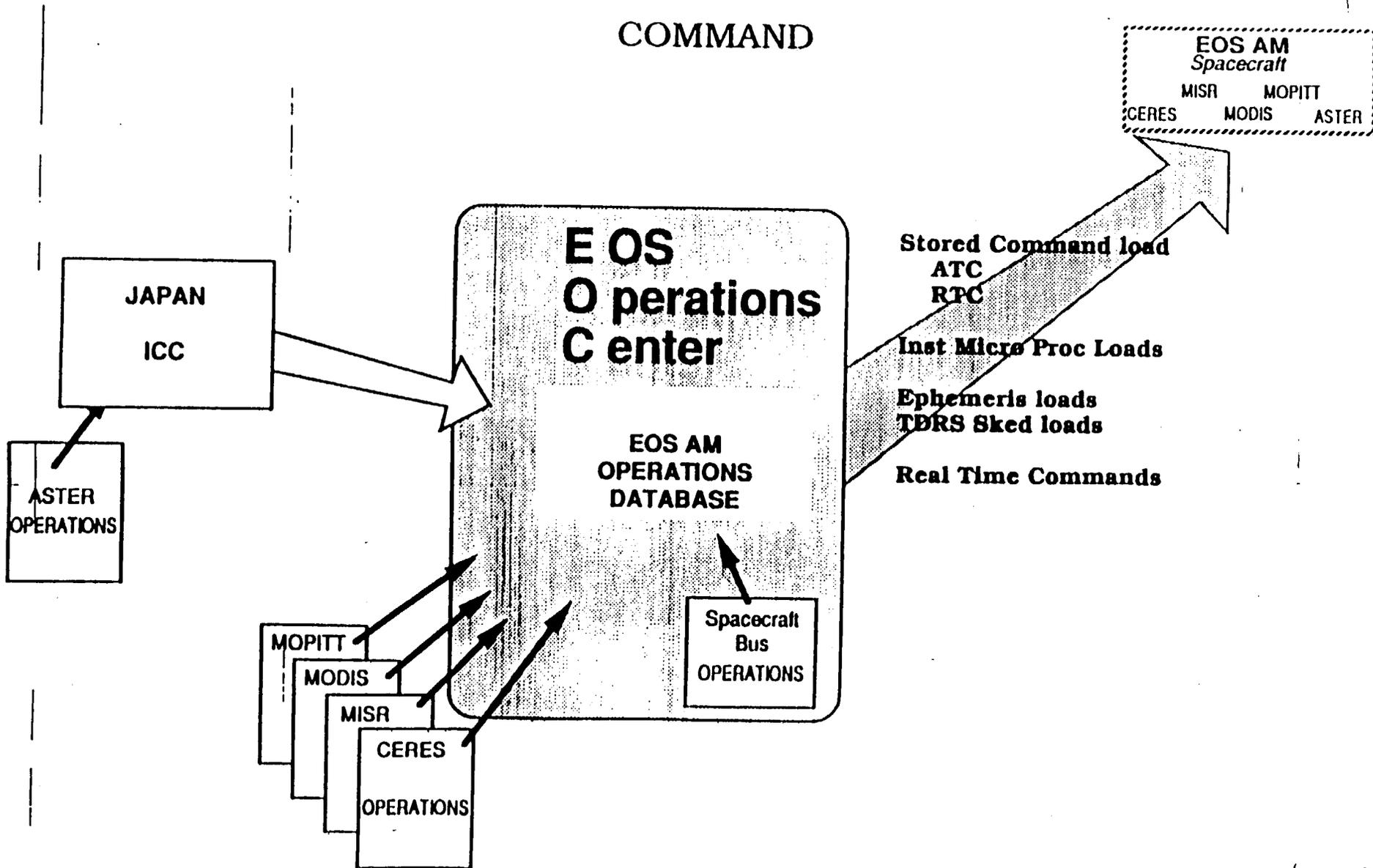
Telemetry data arrives through two primary paths:

1. Science Data Stream (1553 science bus, DB)  
Includes Engineering Data and Memory Dump Data (MODIS)  
collectively called Engineering Data (FLIGHT OPS)
2. Command and Telemetry Data Stream (C & T bus, S-Band)  
Covers telemetry required to monitor health and safety of instrument.  
defined as Housekeeping Data (FLIGHT OPS)

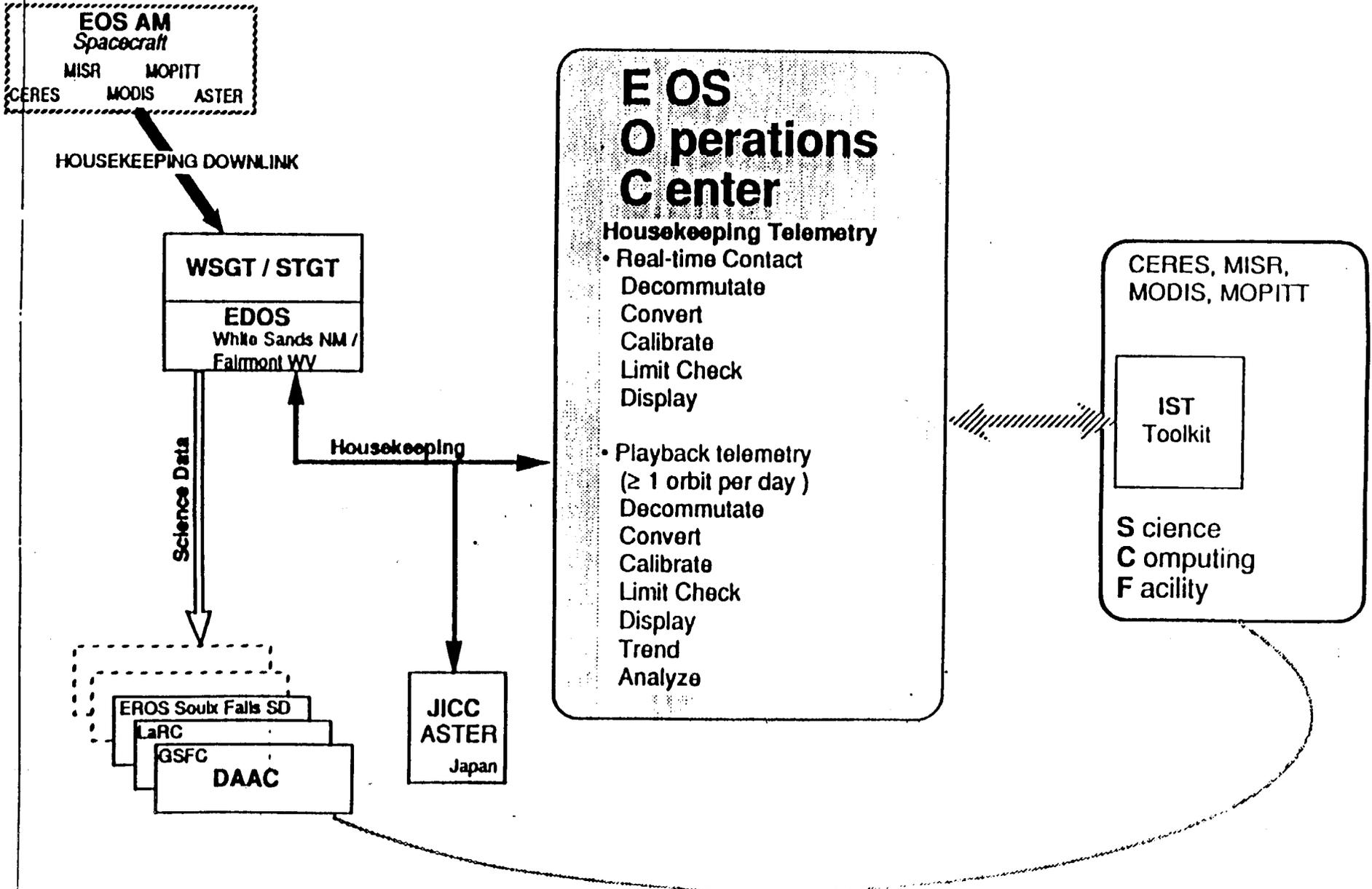
For MODIS, all Housekeeping Data is duplicated in the Engineering Data.  
Some Engineering Data is not duplicated in the Housekeeping Data.

# EOS AM FLIGHT OPERATIONS

## COMMAND



# EOS AM FLIGHT OPERATIONS MONITOR



# GROUND SYSTEM REQUIREMENTS WORKSHOP

On 7-8 September, representatives of the Flight Operations Team, spacecraft (Lockheed-Martin) and all of the instruments met to coordinate requirements for the ground system.

Requirements List applied to Ground System prior to their PDR (December 1994).

## Major Points:

1. The ground system shall utilize Integration and Test (I & T) command mnemonics and procedures. The ground system shall accept, archive, and provide access to the I & T Command and Telemetry Database.
2. The ground system will perform a "state check" every time the spacecraft begins a TDRSS contact. The ground system will review 1 orbit/day from the playback telemetry.
3. Through the Instrument Support Terminal (IST--toolkit furnished by Ground System, hardware and COTS supplied by MODSOT), the MODSOT can perform substantial monitoring from the SCF.

## FUTURE ACTIVITIES

December 1994	Ground System PDR
January 1995	Spacecraft CDR
Spring 1996	MODIS PFM System Level Tests
1997	Command and Monitoring Simulation
1997	Planning for Activation and Evaluation Phase
July 1998	Launch

MODSOT currently being organized; will establish milestones, deliverables, etc. in next few months.